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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,587	10/04/2001	John Pitts	60,469-053; OT-4987	1199

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EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 12/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/970,587	<b>Applicant(s)</b> PITTS ET AL.	
	<b>Examiner</b> Marcus Charles	<b>Art Unit</b> 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 04 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
    1. ☐ Certified copies of the priority documents have been received.  
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This is the first action relating to serial application number 09/970,587, filed 10-04-2001.

Claims 1-22 are currently pending.

### ***Drawings***

The draftsman has approved the drawing filed with this application.

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "longitudinal axis" as in claims 1, 8, 15 and 19, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

In addition, in figure 1, the plane upon which the sectional view is taken should be indicated by Roman Numeral II-II to indicate figure 2. In fig. 1, the cross-sectional line 2-2 should be II-II.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

#### **Abstract**

2. The abstract of the disclosure is objected to because the abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art. Therefore, it is suggested to delete the last sentence from the abstract. Correction is required. See MPEP § 608.01(b).

Disclosure

The disclosure is objected to because of the following informalities:

(I) In page 3, line 21 (paragraph 13), 2-2 should be II-II

(II) The following sub-titles are missing of the "Background of the Invention" are missing.

- (a) Field of the Invention.
- (b) Description of Related

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 8 and 15, it is unclear as to what is the difference between the belt assembly and the belt. In addition, in claims 1, 8, 15 and 19, it is unclear as to the longitudinal axis of the belt. It is not clear what direction is being referred to as the longitudinal axis, it is known that a belt has only one axis rotational axis, which is a rotational axis.

In claims 1, 8, and 17, "the belt" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 8, 10-11 as understood, is rejected under 35 U.S.C. 102(b) as being anticipated by JP('8-247221). JP('8-247221) discloses a belt (1/10) comprising a plurality of cords (3/12) aligned generally parallel to the longitudinal direction of the belt, a jacket (2/11) over the cords; the jacket includes a plurality of grooves (4/13) spaced along the longitudinal direction on at least one side of the jacket and the space between adjacent grooves is not perpendicular to the longitudinal direction of the belt and the groove width (13) comprises a straight line.

In claim 11, the line segment forms an acute angle with the longitudinal direction of the belt.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP('8-247221). JP(8-247221) does not disclose that each groove comprises a plurality of line segment such that each line segment of a groove is at a different angle with the longitudinal direction of the belt. It would have been obvious to one of ordinary skill in the art as a matter of design choice to make the groove from different segments such

that one segment is at a different angle with the longitudinal direction of the belt, since applicant has not disclosed that such configuration solves any specific stated problem or it is for any specific purpose compared to the other configurations disclosed.

Therefore, it appears that the invention would perform equally well with the grooves segments at the same angle with the longitudinal direction.

9. Claims 1-5, 9, 19-22, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over JP('8-247221) in view Miranti, Jr.('662). JP('8-247221) discloses a belt (1/10) comprising a plurality of cords (3/12) aligned generally parallel to the longitudinal direction of the belt, a jacket (2/11) over the cords; the jacket includes a plurality of grooves (4/13) spaced along the length of the belt on at least one side of the jacket. JP('8-247221) does not disclose the spacing between the grooves vary along the length of the belt. Miranti, Jr. discloses a belt (figs. 8-9) comprising a plurality of grooves (28) spaced at varying distances along the length of the belt in order to reduce noise during operation (col. 6, lines 10-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the spacing of the grooves on the belt of JP('8-247221) so that the spacings vary along the length of the belt in view of Miranti, Jr. in order to reduce noise during operation.

In claims 2 and 20, note Miranti, Jr. discloses at least three sequential spacings are different from each other.

In claims 3, 5 and 19, note portions of the grooves (13) are not perpendicular to the length direction of the belt and the line direction of the grooves are not at right angle to the longitudinal direction of the belt.

In claim 4, note the grooves (4) are perpendicular to the length direction of the belt.

In claim 22, note one section of the groove is at non-right angle with the longitudinal direction with the belt and another portion is at a non-right angle with the longitudinal direction with the belt.

Regarding claims 15-18, the method steps would be inherently included during the manufacturing of the belt of JP('8-247221) in view Miranti, Jr.('662).

10. Claims 13 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over JP('8-247221) in view of Westhoff('389). JP('8-247221) is silent concerning the materials of the jacket (body) and the cord. Westhoff discloses a belt (102) made of polyurethane elastomer (96) and the cords (104) made steel wire because polyurethane elastomer is easy to cast or mold while maintaining flexible, high tear strength and good abrasion resistance and the steel cord has low elongation, high strength and flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to made the jacket of the belt of JP('8-247221) from polyurethane elastomer and the cord from steel wire in view of Westhoff so that the belt can be manufactured easily while maintaining high tear strength and good abrasion resistance, flexibility and low elongation properties.

11. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP('8-247221) in view of Miranta, Jr. as applied to claim 1 above, and further in view of Westhoff. JP('8-247221) is silent concerning the materials of the jacket (body) and the cord. Westhoff discloses a belt (102) made of polyurethane elastomer (96) and the cords (104) made steel wire because polyurethane elastomer is easy to cast or mold while maintaining good flexible, good abrasion resistance and the steel cord has low elongation, high tear strength and flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the jacket of the belt of JP('8-247221) from polyurethane elastomer and the cord from steel wire in view of Westhoff so that the belt can be manufactured easily while maintaining good abrasion resistance, high tear strength and flexibility and low elongation properties.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rivera et al.('368), EP('0356798) and Aulanko et al.('063) disclose a flat belt with a body made from an elastomer material. DE('2906619), Waugh('766) and Robertson et al.('291) disclose a belt with grooves unequally spaced along the length direction of the belt. Hirai('375) and Howerton et al.('437) disclose a belt having a cord made from steel wire and a body made from polyurethane.



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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (703) 305-6877. The examiner can normally be reached on Monday -Thursday 7:30 am-600 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on (703) 308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3597 for regular communications and (703) 305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



Marcus Charles  
Examiner  
Art Unit 3682  
December 6, 2002